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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/603,992
Filing Date	25-June-2003
First Named Inventor	Morell, Scott
Art Unit	2841
Examiner Name	GIBSON, RANDY W.
Attorney Docket Number	2003P06347US

**ENCLOSURES (Check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <b>CERTIFICATE OF CORRECTION</b> <i>Copy of 1st page of</i> <i>U.S. Patent No.</i> <i>7,048,085</i>
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**Remarks**

Please see attached Certificate of Correction to correct inventor name for U.S. Patent No. 7,048,085 from Scott Morrell to MORELL.

**Certificate**

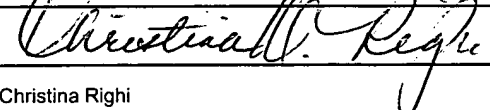
JUN 27 2006

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	SIEMENS VDO AUTOMOTIVE CORPORATION		
Signature			
Printed name	LAURA M. SLENZAK		
Date	10 JUNE 2006	Reg. No.	35,363

**of Correction****CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature		
Typed or printed name	Christina Righi	Date

June 10, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

**FEE TRANSMITTAL**  
**For FY 2006**☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 100.00**Complete if Known**

Application Number	10/603,992
Filing Date	25-June-2003
First Named Inventor	Scott Morell
Examiner Name	Gibson, Randy W.
Art Unit	2841
Attorney Docket No.	2003P06347US

**METHOD OF PAYMENT** (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☒ Deposit Account Deposit Account Number: 19-2179 Deposit Account Name: \_\_\_\_\_

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION** (All the fees below are due upon filing or may be subject to a surcharge.)**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

<u>Fee Description</u>				<u>Fee (\$)</u>	<u>Fee (\$)</u>
Each claim over 20 (including Reissues)				50	25
Each independent claim over 3 (including Reissues)				200	100
Multiple dependent claims				360	180
<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>	
_____ - 20 or HP = _____ x _____ = _____				<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
HP = highest number of total claims paid for, if greater than 20.					
<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>		
_____ - 3 or HP = _____ x _____ = _____					
HP = highest number of independent claims paid for, if greater than 3.					

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

**4. OTHER FEE(S)**

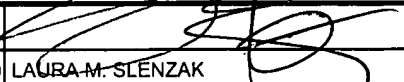
Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): fee for filing certificate of correction

**Fees Paid (\$)**

100.00

**SUBMITTED BY**

Signature		Registration No. (Attorney/Agent) 35,363	Telephone (248) 209-5698
Name (Print/Type)	LAURA M. SLENZAK	Date	10 JUNE 2006

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,048,085 B2

APPLICATION NO.: 10/603,992

ISSUE DATE : 05.23.2006

INVENTOR(S) : MORELL, SCOTT et al

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Please issue a name correction for the above-listed inventor; please correct Scott 'Morrell' to the correct last name of MORELL ( PLEASE SEE ATTACHED FOR FURTHER SPELLING INFORMATION)

## MAILING ADDRESS OF SENDER

LAURA M. SLENZAK  
SIEMENS VDO AUTOMOTIVE CORP.  
2400 EXECUTIVE HILLS BLVD., AUBURN HILLS MI 48326-2780

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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JUN 28 2006



US007048085B2

(12) **United States Patent**  
**Lichtinger et al.**

(10) **Patent No.: US 7,048,085 B2**  
(45) **Date of Patent: May 23, 2006**

(54) **WEIGHT CLASSIFICATION SYSTEM**

(56)

**References Cited**

**U.S. PATENT DOCUMENTS**

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(Continued)

**FOREIGN PATENT DOCUMENTS**

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(Continued)

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Research Disclosure, Jul., 1997.

(Continued)

*Primary Examiner*—Randy W. Gibson

(57)

**ABSTRACT**

A method and apparatus is provided that classifies a seat occupant into one of several different weight classes based on an estimated value of the seat occupant weight. An occupant's measured weight varies when the occupant's seating position changes or when the vehicle travels over adverse road conditions. A plurality of weight sensors are used to measure the weight exerted by a seat occupant against a seat bottom and are used to determine center of gravity for the seat occupant. A seat belt force sensor is also used to assist in classifying the seat occupant. Compensation factors using the seat belt force and center of gravity information are used to generate an estimated weight value. The estimated value of the occupant weight is compared to a series of upper and lower weight thresholds assigned to each of the weight classes to generate an occupant weight sample class. Over a period of time, several estimated weight values are compared to the weight class thresholds. Once a predetermined number of consistent and consecutive occupant weight sample classes is achieved, the occupant is locked into a specific occupant weight class. When the weight class is locked, the separation value between the upper and lower thresholds is increased to account for minor weight variations due to adverse road conditions and changes in occupant position.

(75) Inventors: **Harald Lichtinger**, Auburn Hills, MI (US); **Brian M. Curtis**, Orion, MI (US); **Robert Graf**, Pichl/Gsies (IT); **Daniel Reich**, Macomb, MI (US); **Scott Morrell**, White Lake Township, MI (US); **Maria Kremer**, Pfaffenhofen (DE)

(73) Assignee: **Siemens VDO Automotive Corporation**, Auburn Hills

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 109 days.

(21) Appl. No.: 10/603,992

(22) Filed: Jun. 25, 2003

(65) **Prior Publication Data**

US 2004/0016577 A1 Jan. 29, 2004

**Related U.S. Application Data**

(62) Division of application No. 09/965,390, filed on Sep. 27, 2001, now Pat. No. 6,636,792.

(60) Provisional application No. 60/236,456, filed on Sep. 29, 2000.

(51) **Int. Cl.**  
**B60R 21/15** (2006.01)  
**G01G 19/08** (2006.01)  
**G01L 5/10** (2006.01)  
**G01L 1/04** (2006.01)

(52) **U.S. Cl.** ..... 180/273; 177/144; 73/862.39; 73/1; 280/735

(58) **Field of Classification Search** ..... 180/273; 280/735; 701/45; 177/136, 144, 210 R; 73/862.391

See application file for complete search history.

**15 Claims, 10 Drawing Sheets**

